

What is claimed is:

1-11. (cancelled)

12. (previously presented) Method for deciding whether to reuse or reject a refractory plate of a slide gate valve used for the control of the flow of a molten metal during the casting of said metal from an upper vessel towards a lower level, comprising: identifying a set of parameters, at least one of them being conventionally measured during the casting and at least one of them being proper to the plate; determining the values of the parameters during successive uses of the plate; and comparing the determined values to threshold values.

13. (previously presented) Method according to claim 12 wherein the threshold values are set in relation to the local conditions of use.

14. (previously presented) Method according to claim 12 wherein the decision is based on the instant determination of the plate wear.

15. (previously presented) Method according to claim 14 wherein the instant wear of the throttling lips of the plates is determined by the calculation of the difference between the measured throttling rate of the valve and the calculated throttling rate.

16. (previously presented) Method according to claim 14 wherein the instant wear of the throttling lips is determined by the calculation of the difference between the actual flow rate calculated for an instant position of the valve measured by an appropriate device for an instant ferrostatic pressure calculated in function of the instant metal weight and the inner geometry of the upper vessel at a given time, for a given diameter of the pouring orifice and the same flow rate as calculated according to the laws of physic.

17. (previously presented) Method according to claim 14 wherein the radial plates wear is determined by calculating the difference between the actual flow rate measured when the gate is fully opened, for an instant ferrostatic pressure calculated in function of the instant metal weight and of the inner geometry of the upper vessel at this time and the flow rate calculated according to the laws of physic in the same conditions.

18. (previously presented) Method according to claim 14 wherein the alteration of the characteristics of relative displacement of the plates is determined on the basis of the energy used for the relative displacement of the plates.

19. (previously presented) Method according to claim 12 wherein the plate use history is taken into account in the decision.
20. (previously presented) Method according to claim 19 wherein various events and incidents that occurred during the casting are taken into account in the decision.
21. (previously presented) Method according to claim 12 wherein the decision is based on the instant determination of the plate wear taking into account the plates use history.
22. (currently amended) An apparatus for deciding whether to use or reject a refractory plate of a slide gate valve used for the control of the flow of a molten metal during the casting of said metal from an upper vessel towards a lower vessel, comprising an input unit connected to means for introducing selected variables, a memory unit for the storing the threshold values and a calculation unit able to perform operations on the variables introduced through the input unit and to compare the parameters or the results of said operations on these parameters to the threshold values and an output unit able to emit a signal corresponding to the decision whether to reuse or reject, at least one parameter being conventionally measured during the casting.